

**STATE OF MONTANA
DEPARTMENT OF ADMINISTRATION
STATE PERSONNEL DIVISION**

UPDATED JP IN HARD COPY FILE DATED 01/05
POSITION
DESCRIPTION

ALLOCATION: To be completed after final classification approval by the State Personnel Division or by agencies with delegated classification authority:

Class Code	Title	Grade
852011	Engineering Tech II	11

***** PART I: Identification *****

CURRENT CLASSIFICATION: Class Code: 852009 Title: Engineering Tech I

AGENCY: Agency Code: 5401 Position No: 91218

Department Transportation	Division Highways	
Bureau Construction	Section Great Falls District	Unit

ADDRESS:

Building & Street	Room Number	City	Zip Code	Business Telephone
PO Box 1359		Great Falls	59403	454-5880

FUNCTIONAL DESCRIPTION OF THE WORK UNIT:

The field crew performs location and construction surveys; provides construction inspection and materials testing on highway construction projects; and assists in administering construction contracts.

***** PART II: Job Description *****

1. ASSIGNED DUTIES:

%

20 Location Survey Work

Performs location survey work as follows: establishes route centerline; runs accurate courses of levels; establishes reference points along the route; runs control traverses; performs solar observations; performs cross sectioning; conducts hydraulic surveys; locates and ties section corners; runs topography surveys; computes and checks all survey notes in accordance with the surveying and design manual.

20 Construction Survey Work

Performs slope, culvert, and channel change staking; re-establishes centerline from reference points; blue tops subgrade and gravel courses; and performs other miscellaneous staking and survey work.

30 Construction Inspection Work

Inspects various phases of the contractor's work to insure conformance with the specifications. This includes drainage and hydraulic installations; embankment construction and compaction; crushing, testing and placing of aggregates; mixing, placing and compacting of asphalt and concrete surfacing; and installation of minor items, such as signing, signals, and guardrails. Makes decisions in minor areas of noncompliance. During the construction period, advises supervisor of changed conditions and complex problems initiating or occurring on the project site and relays decisions to the contractor's superintendent or foreman. Maintains a current diary of employees, equipment, and work completed during the construction season.

10 Trains and gives guidance to subordinate employees in the above mentioned duties and tasks.

20 Office Work

Computes grade notes, quantities for summaries and estimates, and assists the Project Manager and office personnel in all phases of office work during the construction season.

Equipment or Machinery Used:

State Vehicles	25%	Misc. Survey Equipment	5%
Calculators	10%	Misc. Testing Equipment	5%
Nuclear Densometer	15%	Engr. Theodolite	10%
Various Scales	5%	EDM Device	10%
(metric and pounds)		Engr. Level	10%
Computer	5%		

2. WORKING CONDITIONS AND PHYSICAL DEMANDS:

Work performed at the construction site involves exposure to noise, fumes, dust, and varying weather conditions. Survey work performed in winter involves exposure to severe weather. Work around highway traffic and construction equipment requires special safety precautions. There is considerable travel to and from construction sites.

3. KNOWLEDGE, SKILLS, AND ABILITIES:

KNOWLEDGE: Considerable knowledge of field engineering, surveying, soil mechanics, and testing procedures. Some knowledge of supervisory techniques.

SKILLS: Skill in the proper use of surveying and testing equipment.

ABILITIES: Ability to be firm but fair with contractor's personnel when working as an inspector; carry out inspection and survey activities; follow oral and written instructions; perform basic and advanced mathematical computations; supervise the work of others; perform physical labor which is strenuous at times; establish and maintain effective working relationships with employees, other agencies, contractors, and the general public; demonstrate necessary knowledge, skills, and abilities by passing the Level II Certification Exam under the MDT Certification Program.

Education and Experience

The above knowledge, skills, and abilities are typically acquired through a combination of education and experience equivalent to graduation from high school and four years experience in survey and construction activities.

4. MANAGEMENT and SUPERVISION of OTHERS:

Pos. No.	Class Code	Title	FTE
95533	852006	Survey Aide I	1.0
95533	852008	Survey Aide II	1.0
91218	852009	Engineering Tech I	2.0

Total organizationally subordinate FTE's: 4

Subordinate personnel may be assigned to this position for training in specific tasks. This position may serve as a Lead Worker or as a Crew Chief in the absence of an Engineering Project Tech III. In most situations, work methods and priorities are determined by the Engineering Project Manager or Engineering Project Tech III.

5. SUPERVISION RECEIVED:

Work is assigned by the Engineering Project Manager or the Engineering Project Tech III. In most situations, work methods are pre-established by department policy and procedure. Work methods may be altered by the Engineering Project Tech II in the absence of an Engineering Project Tech III or Engineering Project Manager in order to bring about the desired results, if conditions so warrant. The Department's Materials Testing Manual, Road and Bridge Specification Handbook, Survey Manual, Construction Manual, Standard Drawings and Specifications, Uniform Traffic Control Device Manual, and appropriate plans and supplemental specifications are used as resources in accomplishing daily work and Department objectives.

6. SCOPE & EFFECT:

Location and survey work is performed to allow design personnel to obtain the best design possible for the location. Errors in the work or neglecting of items may later result in costly change orders and increased cost to the department.

Construction survey work is performed so the project can be properly constructed. Without good survey work and proper use of techniques, the finished product may be substandard and fail prematurely, resulting in increased safety hazards and maintenance costs to the Department.

Construction inspection work is performed to insure conformance with the plans and specifications. Without this compliance, the quality and long term serviceability of the project is compromised.

Office notes are checked to insure proper payment to the contractor. Errors may result in overpayment or underpayment.

Actions and decisions may effect the contractor's operation, which could result in contractor claims. Failure to act upon or require contractor actions may result in damage to property, delays to the public, and unsafe conditions for the traveling public.

7. PERSONAL CONTACTS:

Daily communication with supervisor and coworkers to exchange or gather information. Personal daily contact with contractor personnel during construction projects to advise and solicit cooperation regarding construction practices and test results. Daily communication with subordinates to provide information and to make arrangements.

*****PART III: Signatures *****

IMMEDIATE SUPERVISOR

To the best of my knowledge, the statements in Parts I and II are accurate and complete.

Signature

Date:

Name: _____
(Please Print)Title: _____
(Please Print)**ADMINISTRATIVE REVIEW**

Signature

Date:

Name: _____
(Please Print)Title: _____
(Please Print)

Signature

Date:

Name: _____
(Please Print)

Title: _____
(Please Print)

Agency Director
Or Designee:

Date: _____

Name: _____
(Please Print)

Title: _____
(Please Print)

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